

REMARKS/ARGUMENTS

Claims 1-12 remain in this application. This Amendment is submitted in response to the Official Letter dated January 11, 2005. Favorable reconsideration of the application is respectfully requested.

1. Final Office Action is Premature

It is respectfully submitted that the "Final" status of the Office Action dated January 11, 2005 is inappropriate and premature.

In a first Office Action dated June 28, 2004, Claims 1-5 and 7-11 were rejected under 35 USC 102(e) as being anticipated by "Managing Crop Residue in the Red River Valley" article. Applicant traversed the rejection under 35 USC 102(e) by Amendment dated August 31, 2004. In a second Final Office Action dated January 11, 2005, Claims 1-5 and 7-11 were finally rejected under 35 USC 102(a). Claims 1-5 and 7-11 were never rejected under 35 USC 102(a) in the first Office Action dated June 28, 2004. The first occurrence of the rejection of Claims 1-5 and 7-11 under 35 USC 102(a) was in the Final Office Action.

It is, therefore, respectfully submitted that, in view of this new ground of rejection, reconsideration and withdrawal of the "FINAL" status of the Office Action is requested (see MPEP 706.07 (a) and (d)).

2. Rejection of Claims 1-5 and 7-11 under 35 USC 102(a)

Claims 1-5, 7-11 stand rejected as being anticipated by the "Managing Crop Residue in the Red River Valley" article. The Examiner stated:

"The "Managing Crop Residue" article discloses a method of no-till farming. Inherent in no-till farming are the steps of forming a furrow and introducing the seed within the furrow (see, e.g., the "Missouri No-Till Planting Systems" publication below). The article discloses that it is known to provide a darkened stubble by two ways. First, the article discloses that it is known to burn the stubble. Fields in which stubble have been burnt leave blackened stubble (both unburnt but charred stubble and stubble ash). Thus, the darkened stubble absorbs energy radiation. Second, the article discloses that, as an alternative to burning stubble, liquid hog manure can be applied to the stubble. This liquid hog manure darkens the stubble by the

pigments within the hog manure. The stubble present is from cultivated crops. The method disclosed by the article is applicable to all cereal grains, which inherently includes wheat, barley, oats and rice. The stubble, no matter what color or pigment, will inherently absorb energy radiation.”

It is respectfully submitted that in order for a reference to be an anticipatory reference the reference must teach each and every limitation of the claim. “Managing Crop Residue in the Red River Valley” article appears to disclose a method of managing crop residue by applying liquid hog manure. The article teaches that the liquid hog manure improves the dietary balance of carbon and nitrogen to the soil microorganisms and thereby increases the rate of residue decomposition.

The application of liquid hog manure is merely another form of film or coating applied to the soil to obtain special conditions for plant growth. In contrast, the present invention is directed to a method of no-till farming in which the stubble and other plant matter as opposed to the soil is used to increase the temperature of the soil to prolong the planting season and promote germination and growth, and the development of cultivated plants. To more clearly describe this feature, Applicant has amended the claims to specify that the darkened stubble is provided within the soil without affecting the soil color. The darkened stubble is intended to absorb energy radiation and be converted to heat in the ground. In contrast, application of liquid hog manure is applied to the soil and any crop residue, and merely intended to improve the dietary balance in the soil without regard to the color of the soil and the crop residue.

For at least the foregoing reasons, Claims 1-5, 7-11 are allowable over the applied art. Withdrawal of the rejection under 102(a) is respectfully requested.

3. Rejection of Claims 6 and 12 Under 35 USC 112, 1st Paragraph

Claims 6 and 12 stand rejected as failing to comply with the written description and enablement requirement. The Examiner stated:

“The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Additionally, the

claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant claims that the stubble is darkened by genetically altering the color of the stubble. However, Applicant's specification fails to describe how this genetic altering is accomplished. Genetic altering, or genetic engineering, is a complex endeavor. Applicant's two-sentence description of how a plant would be genetically altered does not convey to a reasonable artisan that the Applicant actually had possession of the genetically altered crop. Furthermore, even if Applicant did have possession, the description fails to convey to others in the art how to "make" their own genetically altered crop."

It has been consistently held that the first paragraph of 35 USC §112 requires nothing more than objective enablement. In satisfying the enablement requirement, an application need not teach, and preferably omits, that which is well-known. An application does not have to be a blueprint in order to satisfy the requirement for enablement under 35 USC §112, first paragraph. How such a teaching is set forth, whether by the use of illustrative examples or by broad descriptive terminology, is of no importance since an application which teaches how to make and use the invention in terms which correspond in scope to the claims must be taken as complying with the first paragraph of 35 USC §112.

Claims 6 and 12 specify a method wherein the darkened stubble is darkened by genetically altering the color of the stubble. The specification further provides such techniques for gene transformation of plant species may include, but are not limited to transformation vector, agroinfection, electroinjection, and particle bombardment with a gene gun or microinjection. The darkened stubble and other plant matter may also be formed by using selective plant breeding techniques well known in the art.

The specification need be enabling only to someone skilled in the relevant art. "Someone skilled in the art" means someone skilled in the art that is the most appropriate to practice the invention. It is not necessary to fill the application with a great amount of detail so that someone not skilled in the art can reproduce the invention. There is an assumption that anyone attempting to reproduce an invention will hire expert consultants for any special technical component.

It is known to plant biotechnologists that the color of the straw of any given plant depends on pigment accumulation in various cellular organelles. There are a great variety of straw colors among different plants. The stem of a living plant has a green appearance and when the plant senescence (dies) the number of chloroplasts and the amount of chlorophyll decrease. This allows the other pigments to be visualized.

One approach of generating plants with darker straw would be to first find the plants that naturally have a darker straw and analyze which genes are responsible. The genes coding for the darker pigments would be targeted to organellar genome to allow the pigment to accumulate in organelles. The genes would be selected to be silent for the most part until the senescence so that the pigment does not interfere with the normal physiological function of the plant. Ideally, a promoter would be used to trigger the pigment synthesis. For example, a promoter could be used to trigger pigment synthesis when the plants are about to be harvested to provide darkened stubble.

In view of the foregoing, when considered from the perspective of someone skilled in the art, it is respectfully submitted that Claims 6 and 12 do comply with the written description and enablement requirement. Reconsideration and withdrawal of the rejection are respectfully requested.

4. Rejection of Claims 1-4 and 7-10 Under 35 USC 102(b)

Claims 1-4, 7-10 stand rejected as being anticipated by the "Missouri No-Till Planting Systems" publication. The Examiner stated:

"The "Missouri No-till Planting Systems" publication (hereinafter, the "Missouri publication") discloses a method for no-till farming. The method comprises forming a furrow and introducing seeds within the furrow. The Missouri publication also discloses that before these steps are performed, the stubble is darkened by application of a burn-down herbicide, such Roundup. Roundup kills plants, turning them brown, thus darkening them. Stubble, no matter what color, absorbs energy from the sun. The Missouri publication also discloses that the method is performed using wheat as the stubble from the cultivated crop.

"Missouri No-Till Planting Systems" publication appears to disclose a variety of no-till procedures. The referenced burn down herbicide is applied 15 days or less before

planting. The herbicide is used to control weeds and not change the color of the residue of a cultivated crop. The Missouri publication does not teach or suggest that the stubble is darkened by application of a burn-down herbicide let alone the claimed step of darkening stubble of a cultivated crop within the soil without affecting the soil color as claimed.

For at least the foregoing reasons Claims 1-4 and 7-10 are allowable over the applied art. Withdrawal of the rejection is respectfully requested.

5. Rejection of Claims 1 and 7 Under 35 USC 102(b)

Claims 1 and 7 stand rejected as being anticipated by U.S. Patent No. 4,765,262 to Morgan. The Examiner stated:

“The Morgan ‘262 patent discloses a drill for performing a method of no-till farming. The method comprises forming a furrow and introducing seed into the furrow. Due to the time pressures faced in agriculture, where there is a window of opportunity for sowing seed, the drill of the Morgan ‘262 patent will inevitably be used at night. Thus, the stubble would be darkened. But the stubble will still absorb energy radiation (e.g. heat) from the ambient air.”

In order for a reference to be an anticipatory reference, the reference must disclose each and every element of the claimed invention. It is respectfully submitted that Morgan does not teach or suggest all the elements recited in the claims.

Applicants invention specifies that the term “darkened” refers to a change in the color of the cultivated crop from the naturally occurring color to a more darker hue than that heretofore naturally occurring for the cultivated crop. The darkened stubble is residues of cultivated crops such as cereal grains or other cultivated crops, for example, flax and canola grains. Clearly, use of a drill at “night” does not result in a darken color stubble as the term darken color is defined and claimed by applicant. The use of a drill at “night” does not change the color of the stubble no more than it changes the color of a person in the night.

For at least the foregoing reasons, Claims 1 and 7 are allowable over the applied art. Withdrawal of the rejection is respectfully requested.

6. Rejection of Claims 6 and 12 Under 35 USC 103(a)

Claims 6 and 12 stand rejected as being unpatentable over the “Missouri No-Till Planting Systems” publication. The Examiner stated:

“As noted above, claims 6 and 12 are rejected under 35 U.S.C. 112 for lack of written description and enablement. However, even if one of ordinary skill in the art would have known how to genetically modify the stubble to change the color, providing genetically modified stubble to achieve a dark color would have been obvious, since the Missouri publication is not limited to particular crop residues but is applicable to all crop residues.”

To establish a prima facie case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the applied reference must teach or suggest all the claim limitations (See MPEP §2143).

It is respectfully submitted that the Missouri publication does not teach or suggest all the claim limitations. The Missouri publication teaches the application of herbicides to control weeds as opposed to residues of cultivated crops. A herbicide is a chemical substance used to destroy or inhibit the growth of weeds. The Missouri publication does not teach or suggest that the herbicide of the Missouri publication may be used to darken the color of stubble, i.e a residue of a cultivated crop. Consequently, it is respectfully submitted that one skilled in the art would not use a herbicide on a cultivated crop (as opposed to a weed) with the intention of darkening the color of the stubble.

For at least the foregoing reasons, Claims 6 and 12 are allowable over the applied art. Withdrawal of the rejection is respectfully requested.

Request For Telephone Interview

As a final matter, if the Examiner has any suggestions concerning different claim phraseology that, in the opinion of the Examiner, more accurately defines the present invention, prior to issuance of another Office Action, Applicant’s undersigned attorney requests the courtesy of a telephone interview at the Examiner’s earliest convenience to

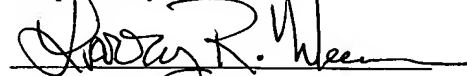
RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 3671

discuss the application. Applicant's undersigned attorney may be contacted at (724) 712-3141.

Conclusion

In view of the amendments and above remarks, it is believed that the application is in condition for allowance. Accordingly, an early Notice Of Allowance is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Larry R. Meenan", written over a horizontal line.

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